

REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Official Action of September 4, 2003, relating to the above-identified application.

A one-month extension of time, together with the associated fee is filed herewith.

With entry of the foregoing amendment, the claims in the application are Claims 1-7.

New Claims 6 and 7 define the functionalized, structurally modified silica of the invention in terms of the method by which it is made. No new matter is therefore presented since new Claim 6 incorporates much of the subject matter of original Claim 4 and new Claim 7 sets forth the additional features of destructuring or compacting and optionally regrounding the silica in a mill.

The rejection of Claims 1-5 under 35 U.S.C. § 102(b), as anticipated by U.S. Patent 5,959,005 to *Hartmann*, is traversed and reconsideration is respectfully requested. The cited reference is assigned to the same assignee as the present application. However, there is an important distinction between the subject matter of the cited reference and the present invention.

Hartmann discloses a method of producing a surface modified, hydrophobic silanized silica powder with the physical chemical properties set forth in the table as shown, for example, in Claim 1 of the patent, in col. 2, beginning at line 42. There is an overlap in connection with the specific surface area (BET), the primary particle size, the tamped density, pH carbon content, and the DBP number. However, it is important to note that the *Hartmann* product is made by modifying the surface with hexamethyldisilazane. Silica produced by the *Hartmann* process is

useful as a filler in silicon rubber systems, in paints, the production of cable gels and other purposes set forth in *Hartmann* beginning at col. 1, lines 48-59.

In contrast, the claims in the present application set forth that the silica has functional groups which are 3-methacryloxypropylsilyl and glycidylloxypropylsilyl. Thus, the claims clearly distinguish from the subject matter of *Hartmann*. The silica according to the present invention can be used for radiation curing coatings, for example, UV coatings, and improves the scratch resistance of surfaces.

This can be seen from the data in the application beginning on pg. 5 which show a comparison between the Aerosil® 8200 and the silica according to the invention as described in Example 1. The Aerosil® 8200 relates to a silica which is surface modified with hexamethylsilazane. This is the same silica as the silica disclosed by *Hartmann*.

In order to compare the *Hartmann* silica with the silica of the present invention, it is necessary to use different dispersing conditions because it is more difficult to disperse the Aerosil® 8200 in a coating composition. Thus, in order to compare the scratch resistance by using the reflectant of light on a surface, it is mandatory to use a silica having the same grindometer value, which defines the largest particles in the dispersion. Without using silicas of the same grindometer value, the light reflection cannot be correctly estimated because larger particles give a lower reflection.

Therefore, in Table 2, the same grindometer value of less than 10 is shown for all the examples. This means that the particle size of all silicas in the comparison in the coating compositions is equal.

The examples contained in this application show that the silica of the present invention, as compared to the silica of *Hartmann* has a better anti-scratch behavior and is much easier to be dispersed in a coating system. These advantages and benefits could not have been predicted from *Hartmann* and, consequently, applicants submit that the claims define a patentable difference with respect to *Hartmann*.

In view of the differences pointed out between the present invention and that of *Hartmann*, applicants respectfully submit that the *Hartmann* reference should be withdrawn as a reference because it fails to describe the invention within the meaning of 35 U.S.C. § 102(b).

In view of the foregoing, favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

SMITH, GAMBRELL & RUSSELL, LLP

By: 

Robert G. Weifacher, Reg. No. 20,531

Suite 3100, Promenade II
1230 Peachtree Street, N.E.
Atlanta, Georgia 30309-3592
Telephone: (404) 815-3593
Facsimile: (404) 685-6893